



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,977	04/07/2006	Shota Murakami	23697-015US1 / NF-2981	5933
26171 7590 07/17/2009 FISH & RICHARDSON P.C. P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER				
BELLINGER, JASON R				
ART UNIT		PAPER NUMBER		
3617				
NOTIFICATION DATE		DELIVERY MODE		
07/17/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary**Application No.**

10/574,977

Applicant(s)

MURAKAMI ET AL.

Examiner

Jason R. Bellinger

Art Unit

3617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Priority

1. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. The petition to gain the benefit of the filed date of application 10/683,269 has been granted.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "114b" and "115b" and "115c" and "116b" have both been used to designate the same elements, respectively. The reference characters cannot share the same leader line, especially if the reference characters are meant to describe different elements of the invention.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first, second, and third rings having diameters d_1 , d_2 , and d_3 , respectively, wherein the relationship of the diameters is $d_1 < d_2 < d_3$, as set forth in claim 3, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the text " $d_1 < d_2 < d_3$ " should be removed from Figure 2. Simply adding this text does not remedy the deficiency set forth in

section 5 above. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinsma et al ('560) in view of Reinsma ('454). Figure 3 of Reinsma et al shows a pin

assembly 14" comprising a pin 58 with a lubricant filling hole 64 and outflow hole 67. A first ring 54 includes an abutment face that abuts one end of the pin 58 and is fixed thereto. A second ring 56 is rotatably fitted on the pin 58. A third ring 57 is also fixed to the pin 58. The pin assembly 14" further includes annular recesses/grooves between respective end faces of the first 54, second 56, and third 57 rings, with sealing means (68-69) disposed in the recessed grooves to prevent leaks.

Reinsma et al ('560) does not show the end faces of the rings directly contacting the end faces of respective adjacent rings. Figure 3 of Reinsma ('454) teaches the use of a pin assembly wherein an inner periphery of an end face of a first ring 63 contacts the inner periphery of an end face of a second ring 75, with an inner periphery of an end face of a third ring 65 contacts the inner periphery of another end face of the second ring 75. These contacting end faces define slide portions between the first 63, second 75, and third 65 rings, with seal faces that form a common radial plane with the slide faces. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the end faces of the rings of Reinsma et al ('560) with the structure taught by Reinsma ('454) as a substitute equivalent configuration (i.e. contacting end faces as opposed to non-contacting end faces), in order to increase the sealing arrangement to prevent leakage and/or loss of lubricant.

Regarding claim 3, Reinsma et al as modified by Reinsma does not specify that the outside diameters of the first, second, and third rings are progressively smaller. However, it would have been obvious to one of ordinary skill in the art at the time of the

invention to form the rings of Reinsma et al as modified by Reinsma in such a manner, as an alternative equivalent configuration, inasmuch as shown by the Applicant.

7. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reinsma et al ('560) in view of Reinsma ('454) as applied to claims 1-3 above, and further in view of Purcell et al. Reinsma et al as modified by Reinsma does not show the structure of a crawler-type traveling apparatus utilizing the pin assembly.

Purcell shows a track drive system comprising a carrier roller, a track roller bogie, idler, sprocket, and track roller pivoted to a track frame with a crawler belt wound around them as shown in Figure 1-3. The system includes a pin assembly coupling means which pivots the track roller bogie to a track frame which is constituted by a first bogie link 72 pivotally coupled to the track frame at pivot pin 110 and includes a second bogie link 80 to which a track roller is mounted and is pivotally coupled to the first bogie link at pin assembly 78.

Therefore, from this teaching, it would have been obvious to one of ordinary skill in the art at the time the invention to have incorporated a permanently sealed rotatable pivot pin assembly, such as suggested by Reinsma et al as modified by Reinsma in order to enhance the pivotal coupling joint of Purcell track drive system, in order to maintain a lubricated pivotable coupling means that is easily replaced if needed, and as a predictable alternative pin assembly.

Response to Arguments

8. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason R Bellinger/
Primary Examiner
Art Unit 3617